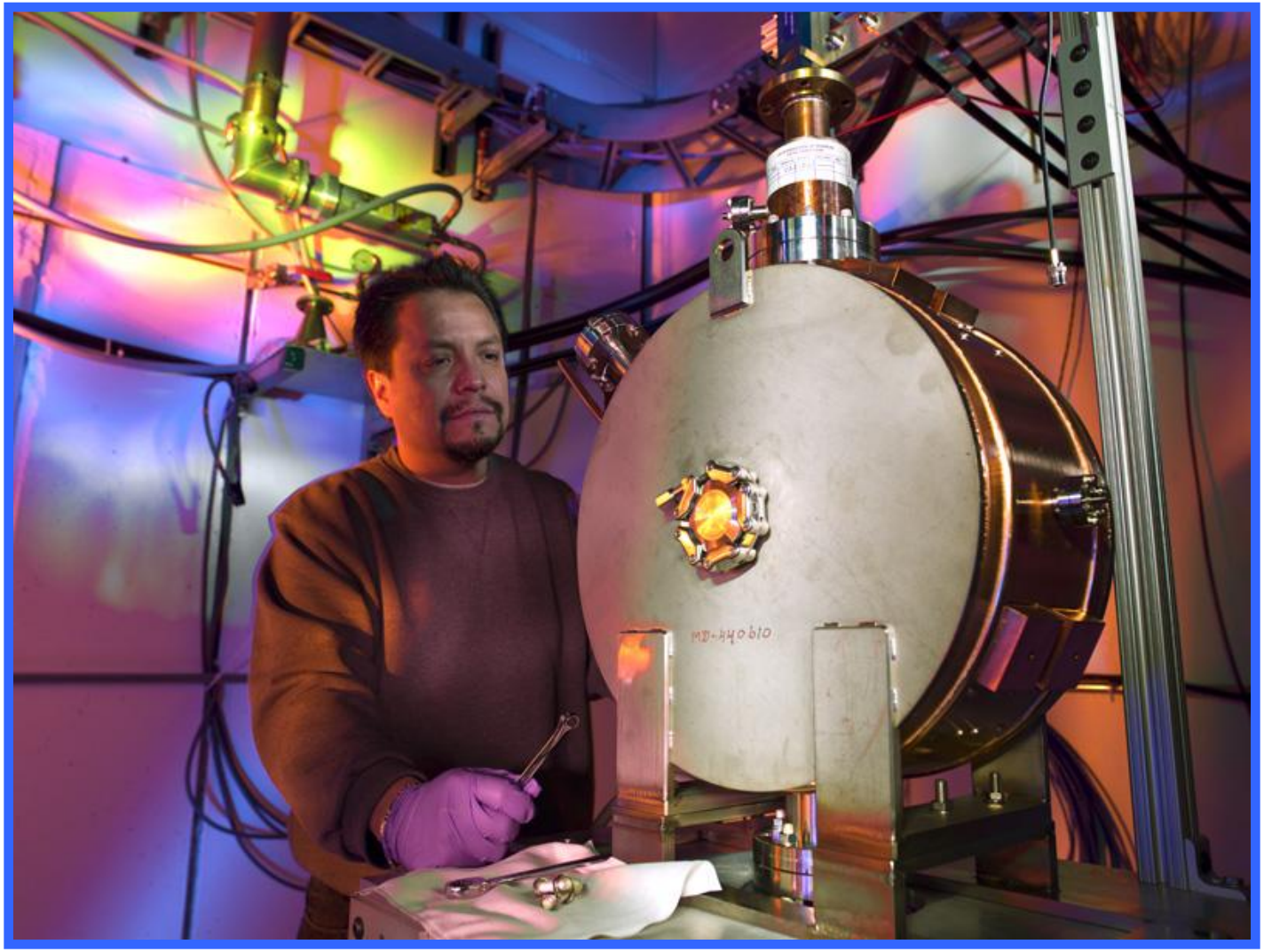
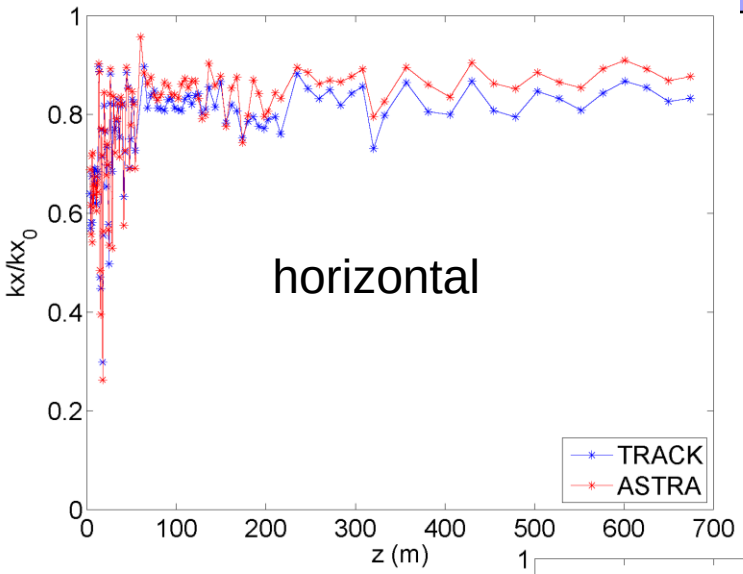
HINS 325 MHz Room Temperature Cavity

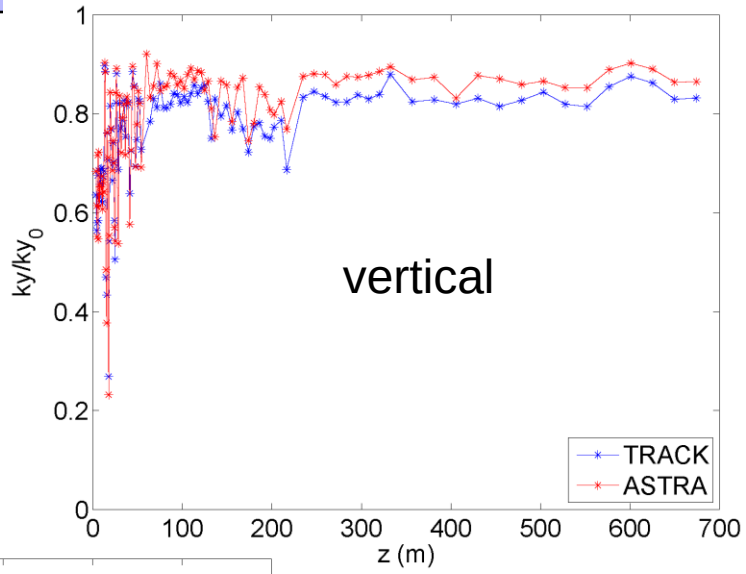


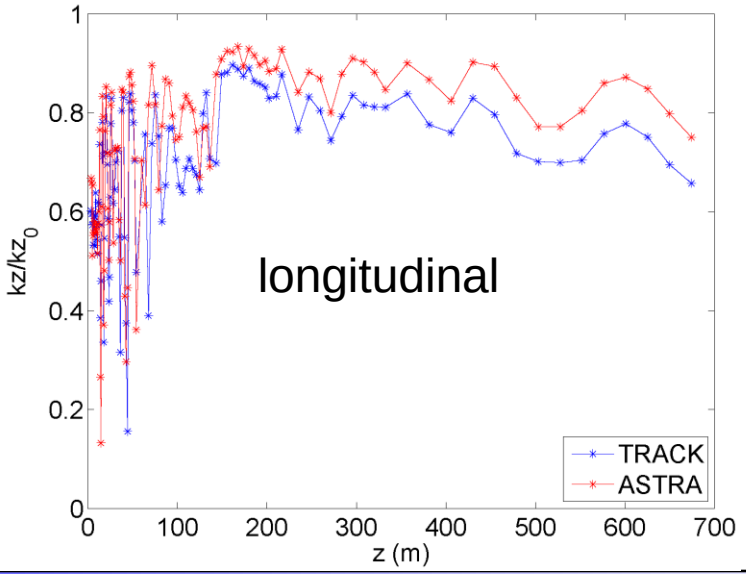
HINS Department Staff

- **J.P. Carneiro**
  - tracking simulation codes
- **D. Johnson**
  - laser-wire diagnostics, Project X transfer lines
- **Ken Koch**
  - HINS and Tevatron technical support
- **R. Madrak**
  - vector modulators, chopper, cavity conditioning
- **E. Peoples**
  - HINS LLRF
- **H. Piekarz**
  - HINS ion source, fast cycling super-ferric magnet development
- **J. Steimel**
  - HINS technology, Meson installation & operations
- **D. Wildman**
  - RF vector modulators
- **R. Zwaska**
  - e-cloud investigations, especially in Main Injector

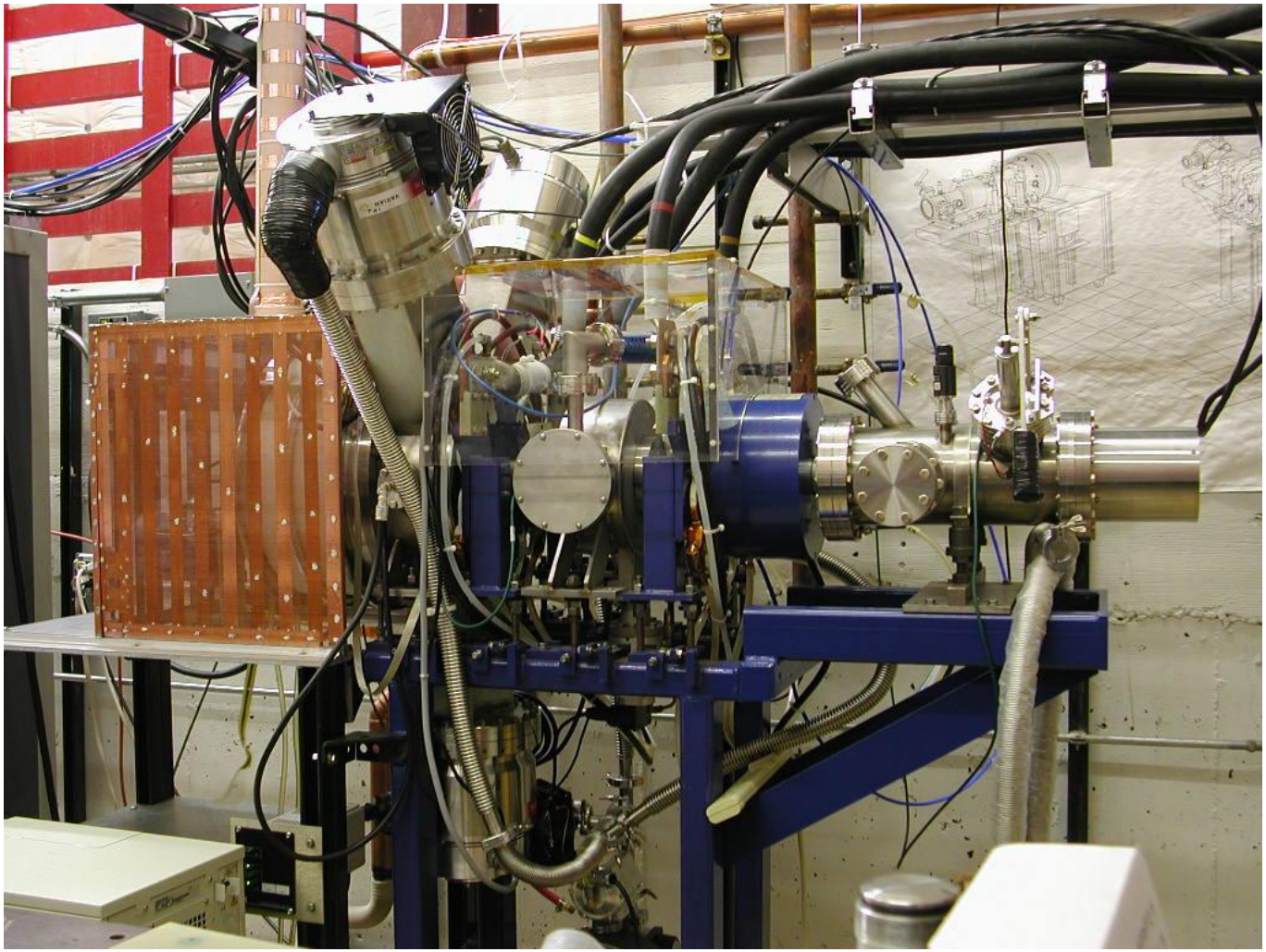
TRACK / ASTRA Linac Tune Depression Comparison @ 45 mA



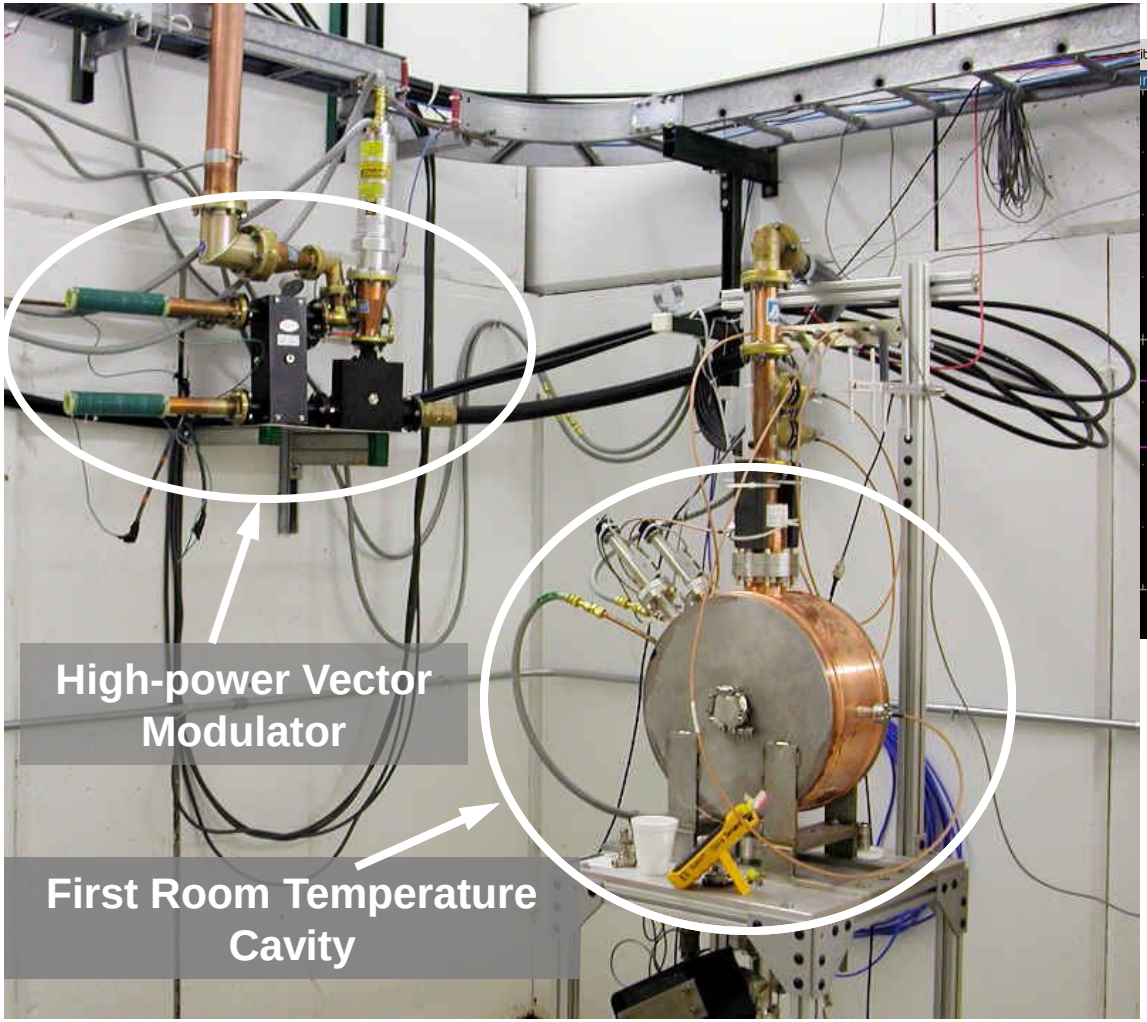


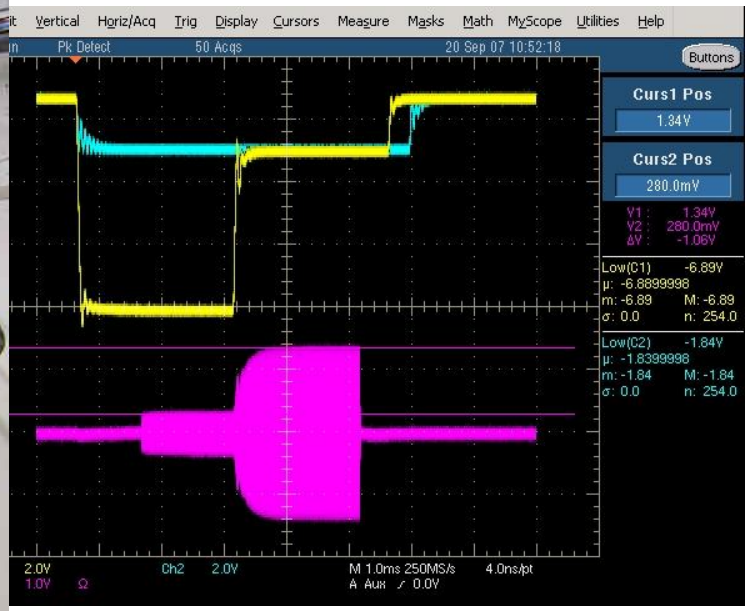


HINS Injector



325 MHz Cavity in Test Cave



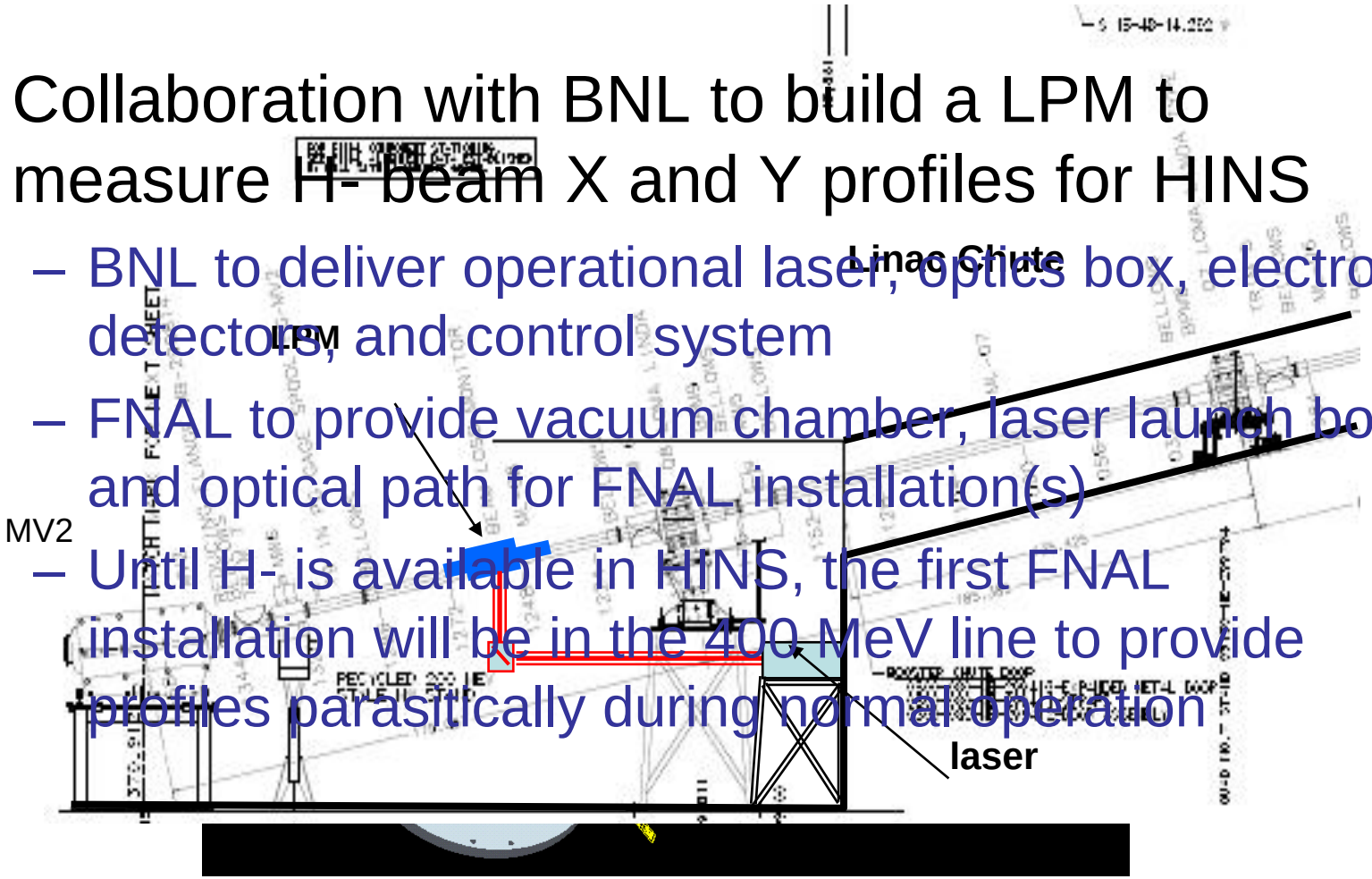


13 dB Amplitude Control with Vector Modulator for 6 kW 3.5 msec RF Pulse

Red trace is cavity RF amplitude; blue and yellow are modulator bias currents

Laser Profile Monitor

- Collaboration with BNL to build a LPM to measure H- beam X and Y profiles for HINS
  - BNL to deliver operational laser, optics box, electron detectors, and control system
  - FNAL to provide vacuum chamber, laser launch box and optical path for FNAL installation(s)
  - Until H- is available in HINS, the first FNAL installation will be in the 400 MeV line to provide profiles parasitically during normal operation



HINS SC Spoke Cavity at VTS

HINS 2008 Objectives in Meson

- Achieve 2.5 MeV beam from RFQ
- Demonstrate operation of multiple 325 MHz room temp cavities with vector modulator control
- Test first SSR1 SC spoke cavity at full pulsed power
- Upgrade LCW system
- Design and possibly begin construction of RT linac section shielding cave in MDB
- There is budget available to support these objectives